

Summary

The invention discloses a method and device for measuring 3-D surface shape by projected moiré interference fringe. The said device includes a projection device for projecting mark point and main grating line, an observation device for receiving the mark point and grating line projected onto the object surface, and two-coordinates rectilinear motion axis. It uses the said two-coordinate rectilinear motion axis and the mark points of projection device and observation device to measure the projected object distance and the projected image distance in a certain imaging position; the observed object distance and the observed image distance; and determines the position of Zero-order fringe according to the mark point on the object; then determines the whole-field fringe order of the object surface by using phase-shift algorithm and unwrapping algorithm; finally accurately work out 3-D surface shape of the object according to the corresponding relationship between the deducted projected moiré interference fringe that takes a certain point on the object as the reference point and the object height.

